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Vol. IV, No. 10

JANUARY, 1916

Bulletin 100

Bulletin

Georgia State College of Agriculture

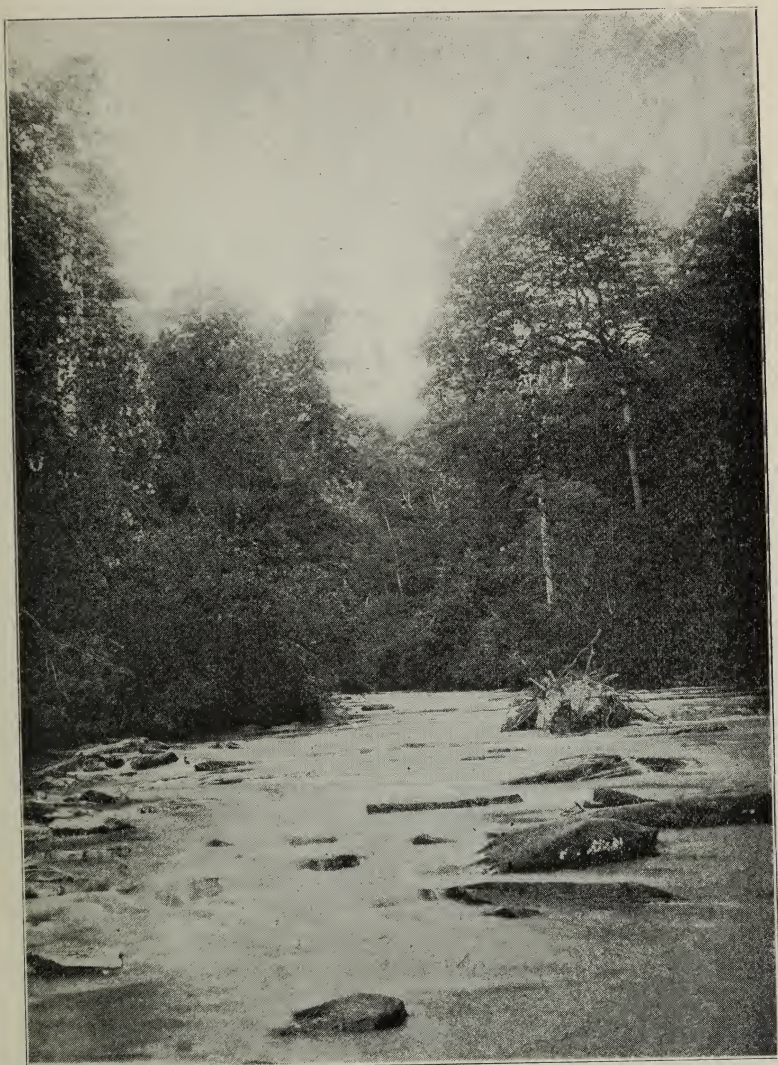


Announcements

Georgia State Forest School
Nature Study School
Ranger School
1916-'17

The University extends a cordial welcome to all educational, agricultural, commercial, manufacturing, financial and industrial bodies, and bodies of like character, having for their object the welfare of the state, to use on special occasions, free of rent, such public buildings of the University as the Chancellor and President of the Agricultural College may approve.

Announcements Forest School 1916-1917



In the Heart of the Appalachians.

Georgia State College of Agriculture

University of Georgia, Athens, Georgia

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JOHN R. FAIR	Professor of Agronomy
MILTON P. JARNAGIN	Professor of Animal Husbandry
T. H. McHATTON	Professor of Horticulture
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W. A. WORSHAM, JR.	Professor of Agricultural Chemistry
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* GUY W. FIROR	Supervisor Extension Schools
JAMES B. BERRY	Professor of Forestry
† MARY E. CRESWELL	State Supervisor, Home Economics
* L. M. CARTER	Junior Professor, Soil Chemistry
* DAVID D. LONG	Soil Expert in State Survey
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† JOHN K. GILES	State Supervisor, Agricultural Clubs
CHARLES A. WHITTLE	Editor-Librarian
* J. W. FIROR	Adjunct Professor of Horticulture
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* S. H. STARR	Adjunct Professor of Farm Management
* E. C. WESTBROOK	Instructor in Agronomy
EARL G. WELCH	Instructor in Farm Mechanics
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† WILLIAM BRADFORD	Assistant State Supervisor Agricultural Clubs
† A. L. HIRLEMAN	Field Agent, Hog Cholera Work
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† C. J. GOODELL	Scientific Assistant in Animal Husbandry
† G. L. BIGFORD	Scientific Assistant in Animal Husbandry
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* PAUL TABOR	Instructor in Agronomy
WILLIAM S. DILTS	Instructor in Poultry Husbandry
† MRS. BESSIE S. WOODS	Assistant State Supervisor, Home Economics
P. O. VANATTER	Superintendent Field Experiments
A. P. WINSTON	Foreman of College Farm
F. W. CRYSLER	Foreman of Greenhouse and Campus
† F. D. GARRISON	District Supervisor County Agents
† W. F. WHATLEY	District Supervisor County Agents
† J. G. OLIVER	District Supervisor County Agents
† R. A. STRATFORD	District Supervisor County Agents
† L. S. WATSON	District Supervisor County Agents
† ELMO RAGSDALE	Field Agent in Horticulture
C. N. KEYSER	Tutor in Horticulture
OLIVE BELL	Clerk and Stenographer
* MRS. PEARL STOREY	Multigraph Operator
* NORA SAYE	Clerk and Stenographer
* ANNIE MAY PENLAND	Clerk and Stenographer
* MRS. E. T. EPPS	Clerk and Stenographer
AGNES HADDOCK	Clerk and Stenographer
* ELIZABETH DOWDLE	Clerk and Stenographer

* In Extension Service.

† In Cooperation with U. S. D. A.

Georgia State Forest School

The State Forest School has existed for eight years as a department of the State College of Agriculture, University of Georgia. The school occupies a handsome twelve-room stone building on the University campus and is situated immediately adjacent to the stately Agricultural Hall. This building is equipped with class-rooms, laboratories, offices, museum and library necessary for the successful presentation of technical forestry subjects.

The timber testing laboratory is a room 40 x 60 feet situated in the basement of the new Mechanical Hall. During the past few months a timber testing machine has been installed. The Forest Survey drafting room and shops are also in Mechanical Hall. Courses in forest by-products and distillation are given in the Department of Agricultural Chemistry, situated in Agricultural Hall. A still, to be devoted to work in the distillation of turpentine, will soon be added to the equipment of this department. The work in soils is given in the Department of Agronomy and students in forestry have the advantages of this well equipped laboratory. The courses in Botany, Inorganic Chemistry, Physics, English Composition, German and French, Economics and Business Administration are given in the University by the college or school having to do with that particular branch. In other words, students in forestry have the advantages of instruction and laboratory practice common to other students in the institution, in addition to the specialized equipment of the Department of Forestry.

A three-acre tract adjacent to the Forest School building is being rapidly developed as a forest garden for the growing of seedlings and the conducting of experiments in planting, silvics and exotic adaptation. Adjacent the forest garden is a ten-acre tract of natural woodland, comprising a range of some sixty species of trees and shrub growth. This tract is being developed as an arboretum and it is planned to introduce specimens of all trees and shrubs which will thrive under Georgia conditions. In the boiler-room of the power plant an open-tank treating plant is installed and experiments in the impregnation of farm timbers are conducted. The Central of Georgia railroad coöperates with the school to the extent of permitting the use of their pressure-system plant for experimental purposes.

The museum consists of a collection of tools used in logging, milling and turpentering; instruments used in surveying, scaling logs and timber estimating; jars of tree seed representing the commercial species of the United States; specimen boards of all important tree species of the United States; material illustrating steps in manufacture of paper from wood pulp, wagon and carriage stock, tight and slack cooperage, flooring and interior finishing, sashes and doors; cross-sections of treated and untreated cross-ties showing

the effects of weathering and wear; and many enlarged photographs showing forest conditions in America and Europe. Material in the museum is used for demonstration purposes in the various courses in forestry.

Objects of the Forest School

The object of the school is national and state service. To this end there is offered a four-year undergraduate course in technical forestry, an eight-week Ranger School, a six-week Nature Study Camp, and short practical courses for students in agriculture who



Typical Forest Scene in North Georgia.

desire general knowledge in the management of small tracts of timberland. Along the line of extension work, the school offers direct assistance to residents of the state in the management of woodlands. Through the correspondence division a course of instruction in practical forestry is offered.

Opportunities in Forestry

In no line of endeavor is the opportunity for a young man to make himself count in the affairs of men so great as in the profession of forestry. Perhaps the reason for this lies in the fact

that forestry offers so wide a range for specialization; in fact, next to law, forestry is the broadest of the professions. In whatever direction a man's inclination may lie, forestry offers congenial work and wonderful opportunities for advancement. Should a man's taste be for the open, free life of the woods and mountains, he has before him two main lines of endeavor. In government work he may compete, under civil service rules, for the positions of forest ranger and forest assistant, with a beginning salary of \$1100 or \$1200 and opportunity for promotion to \$2000 or \$3500. About 200 men compete successfully each year for these positions. The work is healthful, intensely interesting and of a character to bring out the best in a man—and the profession calls only the best.

In private work opportunities are equally good but a man must be willing to start at the bottom. Ability is, however, quickly recognized and, for the efficient man, promotion is rapid. Practically all men with training in forestry who have entered private service have "made good" and hold positions of trust and responsibility. In the woods operations the forester develops into a logging engineer, woods agent or expert cruiser, his salary ranging between \$1000 and \$3000 per year with ample opportunity to become financially interested in the firm. In the manufacturing side of the business he may rise to the position of mill superintendent, with equally great opportunities along financial lines. Instances are not rare where a man has risen steadily until within a period of five or six years, he has acquired control of the business or else branched out for himself. If a man's inclination is for business, there are equally great opportunities in salesmanship, with annual incomes ranging between \$1500 and \$5000. Positions of sales manager and assistant are filled from the ranks of lumber salesmen.

To the man with a mechanical inclination or a chemical turn of mind, opportunities in wood preservation and the chemistry of forest by-products are numerous. Mine and railroad companies are calling for men to manage treating plants for the creosoting of mine timbers, cross-ties and telegraph poles. Equally persistent calls come from the paper mills for experts in paper making. A four-year course in forestry serves as a wonderful basis for law and there awaits the forester-lawyer, lucrative positions with the lumber corporations. To the man with a taste for landscape gardening there is open the position of city forester. Many of the states have already passed constitutional amendments permitting cities and towns the privilege of holding forest land. A number of cities in the United States now hold and manage forest property. In Europe many cities pay all local taxation expenses in this way. The position of city forester carries with it a salary of \$1500 to \$3000 per year.

Description of Work

College work during each of the first two years of the course in forestry extends over a period of eleven months, the year consisting of four terms. In each case the fourth term is conducted in forest camp.

Freshman Year.

The work of the freshman year consists of basic cultural and scientific courses in language, botany, mathematics, forestry, and chemistry with practical work in the carpentry, forge and machine shops. The fourth term is devoted to practice work in forest mensuration, elementary surveying and mapping, field dendrology and practical logging.

Sophomore Year.

During the sophomore year there is continued the basic work in cultural and scientific subjects. A comprehensive course in surveying and mapping is introduced and the work in forestry is extended. The fourth term is devoted to practice work in forest mensuration, forest surveying and mapping, field silviculture, logging and milling, and elementary work in tree diseases.

Junior and Senior Years.

At the beginning of the junior year the student selects his major and two minors and designates the general electives he desires to pursue. Not less than eighteen credit hours may be elected in technical forestry. This arrangement permits of considerable latitude in specialization, whether one desires to prepare for the government service or to enter logging engineering, city forestry, dendro-pathology, business administration, forest management, the utilization of forest by-products, or wood impregnation work.

Forest Camp

Forest camp is located in Fannin county on the Ocoee river twenty-two miles southeast of Blue Ridge. The camp postoffice is Margret. Surrounding the camp is the Georgia Tract, a national forest purchased by the government under the provisions of the Weeks' law. On the tract are to be found all conditions of culled and fire damaged forest, resulting in a great variety of types of hardwoods and conifers. More than eighty species of tree growth have been identified in this forest region.

Fees and Expenses

No tuition is charged in the College of Agriculture and the laboratory fees are small. For each term in Forest Camp a fee of \$10.00 is charged to cover depreciation in the value of instruments and equipment. There are also small fees in connection with laboratory courses in the University and College of Agriculture.

Room rent in the college dormitories, including light and heat,

amounts to \$2.50 per month and board at Denmark Hall is about \$10.00 per month. In fact, the total expense of a year at the College should not amount to more than \$225, and may be kept below this figure.

Remunerative Labor

To a limited extent the school will be able to offer opportunity for students to earn at least a portion of their expenses. One should not, however, plan to any extent upon this income, since the course of study demands practically all of one's time.

Bachelor of Science in Forestry

The degree of Bachelor of Science in Forestry is conferred upon those completing the prescribed course of study, comprising not less than eighty-five credit hours. The freshman and sophomore are four-term years, the junior and senior three-term.

When two credits of a foreign language are presented for entrance, one has satisfied the foreign language requirements of this course. Those who cannot offer foreign language entrance credits are required to complete two courses (six credit hours) in a foreign language.

Military training is required of all students for a period of three years.

Outline of Four Year Degree Course

Freshman Year.

Subject	Credits
Chemistry 2, Inorganic Chemistry-----	3
Botany 1, General Botany-----	3
English 1, English Composition-----	3
Math. 1, Trigonometry-----	2
Forest 19, Principles of Forestry-----	1
Forest 4, Dendrology-----	3
Farm Mech. 1, Shop Work,	} ----- 3
Farm Mech. 2a, Drawing,	
Farm Mech. 3 and 4, Machinery and Power	

Summer Term.

Forest 7, Forest Mensuration-----	2
Forest 12, General Forestry -----	4
	24

Sophomore Year.

Agri. Chem. 1, Organic Chemistry-----	3
Eco. 5, Principles of Economics-----	3
Physics 2, College Physics, or	} ----- 3
English 6 and 7, English Composition-----	
Farm Mech. 5a, Surveying-----	3
Forest 5, Silviculture-----	3
Agron. 5 and 6, Soil Physics and Fertility-----	3

Summer Term.

Forest 7, Forest Mensuration-----	2
Forest 16, Forest Practice-----	4
	24

Junior and Senior Years.

Not later than the beginning of the of the junior year the student is required to designate his specialization and must select, with the advice and approval of the head of the department, the course of study he desires to pursue during the following two years. The major and one minor must be selected from technical forestry subjects, one minor may be selected from a department in Group III, and twelve hours of general electives from departments in Group IV. Whether or not a student will be permitted to elect more than eighteen hours of work a year will depend upon his class record.

(A major consists of twelve credit hours, a minor of six credit hours.)

Group I, Major.

Subject	Credits
Forest 8, Forest Management-----	6
Forest 9, Utilization-----	3
Forest 1, Policy	3
Forest 10, History	
Forest 11, Economics }	
	12

Group II, Minor.

Forest 15, Wood Technology-----	2
Farm Mech. 7b, Timber Physics-----	2
Agri. Chem. 5, Forest By-products-----	2
	6

Group III, Minor.

Farm Mechanics
Agricultural Chemistry
Horticulture
Botany

Group IV, General Electives.

General electives may be chosen from any department of the College of Agriculture or from any college or school of the University.

Description of Courses**Forestry**

JAS. B. BERRY, Professor.

1. **Forest Policy.** The development of policy as reflected in forest legislation. A comprehensive study of the forest laws of all countries, special stress being placed upon those in which the science of forestry has reached a high degree of perfection. A consideration of the forest legislation of the various states. The development of a policy.

Text, lecture, collateral reading. Three hours, third term.

2. **Farm Forestry** (Short course for one year students). General consideration of the farm woodlot. Nursery practice practicable on farm, field planting, improvement cuttings, measuring forest product, seasoning and preservative treatment of farm timbers.

Lecture, collateral reading. One laboratory period, three hours, third term.

3. **Farm Forestry.** Forestry as an adjunct to agriculture. Forest influences, nursery practice, field planting thinnings and improvement cuttings, protection, estimating timber, wood measurements, seasoning and preservative treatment of wood, financial results.

Text, lecture, collateral reading. One laboratory period, three hours, second semester.

4. **Dendrology.** Comprehensive study of the forest trees of North America. Taxonomy, botanical and sivil characteristics, range, winter and summer identification. Field work in the College arborum.

Text, lectures, reports, collateral reading. Two laboratory periods, three hours, entire year.

5. **Silviculture.** First term. Forest ecology, factors of site, quality of site, forest types, silvical regions of North America.

Second term. Silvicultural systems of management, selection of a system, limitations of systems.

Third term. Seedling and planting, artificial regeneration, nursery practice, seed identification, seed testing, storage.

Text, lecture, collateral reading. One laboratory period, three hours, entire year.

6. **Forest Protection.** Methods of preventing, fighting and controlling forest fire. Location and use of lookout-towers, telephones, wireless and heliographs. Caches for tools and supplies. Maps and protection plans. Creating public sentiment and organizing local residents.

Lecture, collateral reading. Three hours, first term.

7. **Forest Mensuration.** Part 1, freshman summer camp. Units of measurement, use of volume tables, estimating standing timber, log rules, mill-scale studies.

Part 2, sophomore summer camp. Formation of volume tables, growth tables, yield tables. Advanced work in estimating standing timber.

Text, lecture and field work, four credits.

8. **Forest Management.** First term. Forest Organization. Consideration of the normal forest, volume of growing stock under different systems of silvicultural management. Determining the felling budget. Division of the forest area.

Second term. Forest Finance. Value of forest property. Value based on productive capacity. Forest accounting. Financial rotation. Problems in forest finance. Taxation of forest property.

Third term. Working Plans. Provisions of the plan. Data necessary for the construction of a plan. Detailed study of a plan for a highly specialized forest. Preliminary working plans. Each student is required to make a detailed plan for a small forest area,

collecting the necessary data himself, drafting his plan and placing it in final form for filing in the school library.

Text, lecture, field work. Six laboratory periods, six credits, entire year.

9. **Forest Utilization.** Systematic study of logging operations in different sections of North America; character of tools used; wood transportation; comparison of costs of the various operations; labor conditions; camp, board and sanitation. Milling and manufacture;



Typical Swamp Forests of South Georgia.

costs, markets, grading. Specialized industries; wood pulp, handles, matches, etc. Seasoning of lumber; treatment to prevent stain.

A report on a specific operation is required. This will be according to outline and will include the woods operations, transport, milling, manufacture, utilization of waste, marketing. Each student is required to spend not less than ten days in a logging camp and around the mill in the collection of data. Text, lecture, collateral reading, field work. Three credits entire year.

10. **Forest History.** An analysis of the economic conditions

which have resulted in the development of forestry. The influence of form of government and property rights. Text, lecture, collateral reading. Three credits, first term.

11. **Forest Economics.** The relation existing between the practice of forestry, industry, and the prosperity of a country. Taxation. Reports upon the economic importance of specific industries will be a feature of the course. Text, lecture, reports, collateral reading. Three credits, second term.

12. **General Forestry.** Elementary forest field work in dendrology surveying, logging, camping and packing. Training in the work of a Forest Service guard. Text, lecture, field work. Freshman, summer camp, two months. Four credits.

13. **Dendropathology.** Systematic study of the important tree diseases; means of identification; methods of control. Text, lecture, collateral reading. Two laboratory periods, three credits, second term.

14. **Forest Administration.** Contracts, agency, appropriation of water for power and irrigation, affidavits, bonds, commercial paper. The work will be considered from the standpoint of the Forest Service. Text, lecture, collateral reading. Three credits, third term.

15. **Wood Technology.** Structure of wood tissue; classification of fibers; identification of woods, generic and specific. Both microscopic and macroscopic identification will be considered. Each student is required to make a series of microscopic slides for use in the course. Text, lecture, reports, collateral reading. Four laboratory periods. Two credits, first term.

16. **Field Work.** Field work in forest surveying, silviculture, forest soils, logging engineering, tree diseases. This work will be under the supervision of the head of department concerned. Lecture and field work. Sophomore, summer camp, two months. Four credits.

17. **Seminar.** Systematic review, special investigative studies, research. To be considered in connection with forest "18." Three hours, entire year. Three credits.

18. **Thesis.** The subject of the thesis is selected in consultation with the head of the school and may be along lines of original research or simply investigative. For students desiring to enter private work it will be along the line of their specialization. The thesis must come up to certain specifications and will be filed in the Forest School library. Three credits.

19. **Principles of Forestry.** Forest Influences. Relation of forests to agriculture, navigation, industry. Results of general deforestation. Products of the forest. Forest areas of the world. The movement for the conservation of natural resources. The profession of forestry. Lecture, collateral reading. Three hours per week, third term. One credit.

Courses of Study in the University

Course of study in science, literature, agriculture and economics are outlined in the general announcement of the University of Georgia and, in part, in the announcement of the Georgia State College of Agriculture, either of which may be had upon application.

Ranger School

Forest Camp, June 21 to August 15.

The Ranger School is created to supply a demand for a short course of training in practical forest engineering, but does not prepare a man for a position in professional forestry. The object of the work is to make a man, already acquainted with woods work, more efficient in his labor. The school is open to men already in the forest service, woodsmen who desire to prepare for the ranger examination, and lumbermen who desire technical training in timber cruising and surveying.

Forest Camp

The equipment of the camp consists of 9 x 9 wall tents, each arranged for two men, and library and dining tents. The tents will be provided with wood floors, cots and ticks, but it will be necessary for students to bring with them from home the necessary bedding, etc. Not less than a pair of blankets and one quilt should be provided for the nights are chilly. The personal effects of the students should be serviceable and simple—hob-nailed boots, woolen socks, khaki pants, woolen shirts mackinaw or canvas coat and soft felt hat. Each man is required to supply himself with a belt axe and box compass, which may be purchased through the school.

A number of textbooks will be required in connection with the various courses of study but these may be purchased through the school if the order is placed early. The camp library will contain a good assortment of forest literature and all the important lumber, trade and forest journals. The school day will consist of eight hours—eight to twelve in the morning and 1:30 to 5:30 in the afternoon. With the exception of Wednesday afternoon and Sunday, work will be arranged for every day of the week.

Expenses. In addition to the regular tuition of \$10, there is a laboratory fee of \$10 to cover cost of equipment. Railroad fare will be light and board may be had at the camp mess at a very reasonable figure. The mess will be conducted upon a coöperative basis and the indications are that the charge will not be more than \$4 per week.

Admission and Credit. The camp is open to men of good character who have attained an age of 18 years and have completed their grammar school work. Upon completion of the course of study there will be held a "model" ranger examination, successful com-

petition in which entitles a man to a certificate from the school. To those men possessing the necessary qualifications, who desire to matriculate in the Forest School, credit will be given for the freshman summer camp.

Courses of Study

Dendrology. The identification of trees and shrubs, native and introduced, common to Georgia and the south. Special stress placed upon characteristics present only in cut logs. Herbarium required from each student. Text: Collins and Preston's "Wild and Commonly Cultivated Trees."

Surveying. Use of box compass in running lines, pacing, location, platting notes, mapping, methods of survey, resurvey, marking corners. Text, Carey's "Handbook for Northern Woodsmen."

Mensuration. Units of measurement, log rules, estimating timber, use of volume tables, methods of reconnaissance. Text, Graves' "Forest Mensuration."

Lumbering. Study of woods operations, tools used and organization of work, methods of transport, milling. Scientific management of woods operations. Note-book and report.

Special Lectures. As opportunity offers arrangements will be made for addresses upon pertinent subjects by Forest Service officials, prominent lumbermen and visiting teachers. Experts in various lines will discuss fire protection, forest tenance, grazing in the forest, reconnaissance work, camping and woodcraft.

Application for Enrollment

In order to make proper arrangements it will be necessary that all application be in the hands of the director not later than May 15.

Nature Study School

Forest Camp, July 5 to August 15.

There is a growing tendency to introduce nature study, forestry and agriculture in the secondary schools of the state. The Nature Study School is created to supply this demand. The school is open to teachers and prospective teachers of both sexes and to mature men and women who desire a general knowledge of the woods and fields. Every facility will be offered those desiring to collect material for class room demonstrations.

Location of Forest Camp

Forest Camp is located on the Georgia Tract, a national forest situated in Fannin and Union counties, and is about twenty miles southeast of Blue Ridge in the heart of the Blue Ridge Mountains. The camp is situated on the picturesque Ocoee river, a mountain stream some seventy-five feet in width, affording good bathing, fishing and canoeing.

Forest Camp may be reached by team from Blue Ridge, the drive of some four hours being through a country of wild scenic beauty and grandeur. The road winds through dense stands of yellow poplar and white pine; over high, commanding points where one sees the hills rising tier on tier to the horizon. The air is clear and bracing, the nights cool—in fact, everything is just as it should be when health is a big consideration.



Forest School Students Rerunning a Lot Line.

Expenses

In addition to the regular tuition of \$10.00, there is a laboratory fee of \$10.00 to cover cost of equipment. The railroad fare will amount to little and the cost of team hire, if shared by several, will also be light.

Board may be had in the vicinity, about one mile from Forest Camp, at a cost of \$5.00 per week. The school will, however, conduct a boarding establishment on a coöperative basis and the cost should be kept below \$4.00 per week.

Admission and Credit

Forest Camp is open to all persons of good moral character who have the ability to apply themselves to work. Forest Camp is not a summer resort in the ordinary sense of the word.

Upon the successful completion of the prescribed work, high school graduates desiring to matriculate in the Forest School will be given credit for the freshman summer camp. Teachers, and prospective teachers, will be given college credit for one course, as outlined in the regulations governing the requirements for a state certificate. College credit, however, is not the sole object, and it is hoped that many nature lovers of mature years will avail themselves of the privileges of the camp.

In order to make the necessary arrangements it is important that all applications for admission to Forest Camp be in the director's hands not later than May 15. The application should be accompanied by check or money order to cover tuition and laboratory fee. Those desiring board at camp are requested to make a deposit of \$20.00 (to constitute a working capital) at the time they enter camp.

Forest Camp Library

The library will contain a liberal collection of forestry, nature study, trade and lumber journals. It will, however, be an additional pleasure if students will have their subscriptions to magazines and journals changed to Forest Camp during the time they are there.

Within a radius of a mile of Forest Camp there is a postoffice, with daily mail delivery, a general store, and a good boarding house.

Recreation

The class work will be usually in the form of excursions in the nearby woods, to the National Forest tract, down the river, up one of the numerous mountains, to one of the many sawmill operations. Often classes will be away the entire day from camp. There will be something new in store with each sunrise—some new exploration, some new sight. Wild life is abundant and there will be many outings with DeLoach, McHatton and Brittain—men who are on “speaking terms” with the birds, the trees and the woods-folk. Every moment will be an inspiration.

“Between times,” when school is not in session, there will be opportunity for private exploration, for fishing trips and for mountain “hikes.” While fishing is not permitted on Freedom Lodge Forest, unlimited and the best of fishing may be had within a radius of two miles of camp. During the summer the river is often very low but, no matter how low, there are “holes” where the water is moderately deep, clear and warm, and the bottom sandy—just the best kind of a place for a hot afternoon.

About the camp there is a small area of level ground and it is planned to build one or two tennis courts. Bring your raquets and

balls. In fact, bring anything which will make the summer just the "best ever." A kodak will give unlimited enjoyment and provision will be made for development of films.

Not the least of the pleasures will be the "camp fire"—to sit by one's lonesome and gaze into the glowing embers, or to lounge about a roaring fire "half a hundred strong" and sing "Georgia" and "Alma Mater."

Description of Courses

Dendrology. The identification of trees and shrubs, both native and introduced, common to Georgia and the South. A herbarium is required from each student. Text: Collins and Preston's "Wild and Commonly Cultivated Trees." Lecture and field work.

Professor McHatton.

Surveying. Use of box-campas in running lines, pacing, location, platting notes, mapping. Methods of survey, resurvey, marking corners. Text, Carey's "Handbook for Northern Woodsmen." Lecture and field work.

Professor Hart.

Mensuration. Measurement of height and diameter, determination of the contents of standing trees, scaling logs, units of measurement, volume tables, timber estimating. Text, Graves' "Forest Mensuration." Lecture and field work.

Professor Berry.

Ornithology. The identification of game and other birds common to Georgia, study of the nesting and feeding habits, birds injurious to agricultural crops, national preservation of bird life. Text, Chapman's "Handbook of Birds" (Pocket edition). Lecture and field work. Note-book.

Professor DeLoach, Director of Exp. Station.

Silviculture. Wood production, increment, factors of plant growth, life history of the forest types, forest tenance. Text, Graves' "Principles of Handling Woodlands." Lecture and field work.

Professor Berry.

Camping Practice. Preparation for directing "Boy Scout" activities, equipment for camping, choosing a camp site, temporary and permanent shelter, camp cookery, emergency treatment of wounds. Text, Kephart's "Book of Camping and Woodcraft." Lecture and field work.

Forest Supervisor Clark and Forest Supervisor Shields.

Geology. Identification of rock formations, disintegration of rock, classification and identification of soils, soil survey. Lecture and field work. Note-book.

Professor Fain, Professor Crabb.

Zoölogy. Identification of wild animals common to the south, study of their habits and activities, injury to forest and field crops as a result of the work of certain animals. Lecture and field work. Note-book.

Professor Brittain, State Supt. of Education.

Forest Botany. Identification and classification of herbaceous forest plants. Identification of fungi and plant disease. Lecture and field work. Note-book.

Special Lectures. From time to time there will be provided special lectures upon forestry and allied subjects. In many cases these lecturers will be men connected with the United States Forest Service, with the state service, or with one of the many large lumber corporations operating in northern Georgia.

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